

| L Number | Hits | Search Text | DB | Time stamp |
|----------|---------|---|---|---------------------|
| 1 | 377 | gain with reduce adj noise | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2003/10/30 11:30 |
| 2 | 2042453 | gain with reduce near\$3 noise | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2003/10/30 11:36 |
| 3 | 1987741 | gain with reduce near\$2 noise | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2003/10/30 11:31 |
| 4 | 57397 | (gain with reduce near\$2 noise) and pixel | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2003/10/30 11:36 |
| 5 | 50637 | (gain with reduce near\$2 noise) and pixels | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2003/10/30 11:32 |
| 6 | 38 | ((gain with reduce near\$2 noise) and pixels) and initial adj gain | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2003/10/30 11:37 |
| 7 | 38 | ((gain with reduce near\$2 noise) and pixels) and initial adj gain) and gain\$2 | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2003/10/30 11:35 |
| 8 | 912 | gain with reduce near3 noise | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2003/10/30 12:18 |
| 9 | 761 | gain with reduce near2 noise | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2003/10/30 11:36 |
| 10 | 54 | (gain with reduce near2 noise) and pixel | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2003/10/30 11:37 |
| 11 | 57 | (gain with reduce near2 noise) and pixel\$2 | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2003/10/30 11:53 |
| 13 | 57 | ((gain with reduce near2 noise) and pixel\$2) and gain\$2 | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2003/10/30 11:53 |
| 14 | 129 | (gain with reduce near3 noise) and (preamp or preamplifier or pre-amp or pre-amplifier or pre adj amplifier) | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2003/10/30 12:19 |
| 15 | 42 | ((gain with reduce near3 noise) and (preamp or preamplifier or pre-amp or pre-amplifier or pre adj amplifier)) and memory | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2003/10/30 12:19 |

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| 16 | 3 | ((gain with reduce near3 noise) and (preamp or preamplifier or pre-amp or pre-amplifier or pre adj amplifier)) and memory) and pixel\$2 | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2003/10/30 12:20 |
| - | 10 | "5698844" | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2003/10/30 11:30 |
| - | 0 | ("56988434").PN. | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2003/03/31 17:45 |
| - | 2 | ("5698844").PN. | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2003/04/01 13:13 |
| - | 33342 | conductance | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2003/03/31 17:57 |
| - | 877 | conductance and (image adj sensor or image-sensor or imager or ccd) | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2003/03/31 17:58 |
| - | 326 | (conductance and (image adj sensor or image-sensor or imager or ccd)) and memory | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2003/03/31 19:05 |
| - | 200 | ((conductance and (image adj sensor or image-sensor or imager or ccd)) and memory) and transfer | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2003/03/31 17:58 |
| - | 104 | ((conductance and (image adj sensor or image-sensor or imager or ccd)) and memory) and transfer) and load | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2003/03/31 17:58 |
| - | 57 | ((conductance and (image adj sensor or image-sensor or imager or ccd)) and memory) and transfer) and load) and gain | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2003/03/31 17:59 |
| - | 57 | ((conductance and (image adj sensor or image-sensor or imager or ccd)) and memory) and transfer) and load) and gain | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2003/03/31 17:59 |
| - | 56 | ((conductance and (image adj sensor or image-sensor or imager or ccd)) and memory) and transfer) and load) and gain) and amplif\$7 | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2003/03/31 17:59 |
| - | 44 | ((conductance and (image adj sensor or image-sensor or imager or ccd)) and memory) and transfer) and load) and gain) and (amplify or amplification or amplifying) | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2003/03/31 18:20 |
| - | 4 | ("5786588") or ("5955753")).PN. | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2003/03/31 18:21 |

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| - | 5 | (US-5280511-\$ or US-5252868-\$ or US-4704635-\$ or US-5955753-\$ or US-5786588-\$).did. | USPAT | 2003/03/31 18:25 |
| - | 0 | ((US-5280511-\$ or US-5252868-\$ or US-4704635-\$ or US-5955753-\$ or US-5786588-\$).did.) and gain with different | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2003/03/31 18:22 |
| - | 1 | ((US-5280511-\$ or US-5252868-\$ or US-4704635-\$ or US-5955753-\$ or US-5786588-\$).did.) and gain with differ\$4 | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2003/03/31 18:22 |
| - | 3 | ((US-5280511-\$ or US-5252868-\$ or US-4704635-\$ or US-5955753-\$ or US-5786588-\$).did.) and gain | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2003/03/31 18:24 |
| - | 17 | ((conductance and (image adj sensor or image-sensor or imager or ccd)) and memory) and (noise with (reduction or ruduc\$4)) | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2003/03/31 19:11 |
| - | 11 | ((((conductance and (image adj sensor or image-sensor or imager or ccd)) and memory) and (noise with (reduction or ruduc\$4))) and gain | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2003/03/31 19:07 |
| - | 39935 | (noise with (reduction or ruduc\$4)) | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2003/03/31 19:11 |
| - | 1190 | (noise with (reduction or ruduc\$4)) with (gain or gains) | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2003/03/31 19:12 |
| - | 361 | ((noise with (reduction or ruduc\$4)) with (gain or gains)) with amplifier | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2003/03/31 19:16 |
| - | 23 | ((noise with (reduction or ruduc\$4)) with (gain or gains)) with amplifier with (different or difference) | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2003/03/31 19:13 |
| - | 3 | ((noise with (reduction or ruduc\$4)) with (gain or gains)) with mos | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2003/03/31 19:16 |
| - | 2 | ("5955753").PN. | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2003/04/01 13:16 |
| - | 2 | ("5786588").PN. | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2003/04/01 13:16 |
| - | 400 | memory with gain with (pixel or sensor) | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2003/04/01 13:27 |

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| - | 2 | memory with gain with (pixel or sensor) with mos | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2003/04/01 13:20 |
| - | 2 | memory with gain with (pixel or sensor or light) with mos | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2003/04/01 13:20 |
| - | 20 | memory with gain with (pixel or sensor) with (vary or change or different) | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2003/04/01 13:26 |
| - | 116 | memory with gain with (pixel or sensor) and camera | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2003/04/01 13:26 |
| - | 12 | memory with gain with (pixel or sensor) with noise | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2003/04/01 13:27 |
| - | 3 | ("5698844" "5717458" "5861620").PN. | USPAT | 2003/04/01 13:34 |
| - | 5 | ("5182623" "5311320" "5652622" "5693932" "5737016").PN. | USPAT | 2003/04/01 13:42 |
| - | 9 | ("4768084" "5119202" "5122881" "5144447" "5187583" "5335008" "5420631" "5453783" "5539461").PN. | USPAT | 2003/04/01 13:43 |
| - | 6 | ("Re34309" "5288988" "5311319" "5424529" "5488415" "5587738").PN. | USPAT | 2003/04/01 13:43 |
| - | 3 | 5861620.URPN. | USPAT | 2003/04/01 13:44 |
| - | 17 | (US-5280511-\$ or US-5252868-\$ or US-4704635-\$ or US-5955753-\$ or US-5786588-\$ or US-6493030-\$ or US-6147338-\$ or US-5698844-\$ or US-5717458-\$ or US-5861620-\$ or US-5737016-\$ or US-5693932-\$ or US-5652622-\$ or US-5311320-\$ or US-5182623-\$).did. or (JP-01039171-\$).did. or (JP-2000078473-\$).did. | USPAT; JPO; DERWENT | 2003/04/01 13:44 |
| - | 13 | ((US-5280511-\$ or US-5252868-\$ or US-4704635-\$ or US-5955753-\$ or US-5786588-\$ or US-6493030-\$ or US-6147338-\$ or US-5698844-\$ or US-5717458-\$ or US-5861620-\$ or US-5737016-\$ or US-5693932-\$ or US-5652622-\$ or US-5311320-\$ or US-5182623-\$).did. or (JP-01039171-\$).did. or (JP-2000078473-\$).did.) and gain | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2003/04/01 13:45 |
| - | 13 | ((US-5280511-\$ or US-5252868-\$ or US-4704635-\$ or US-5955753-\$ or US-5786588-\$ or US-6493030-\$ or US-6147338-\$ or US-5698844-\$ or US-5717458-\$ or US-5861620-\$ or US-5737016-\$ or US-5693932-\$ or US-5652622-\$ or US-5311320-\$ or US-5182623-\$).did. or (JP-01039171-\$).did. or (JP-2000078473-\$).did.) and gain | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2003/04/01 13:49 |

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| - | 7 | ((((US-5280511-\$ or US-5252868-\$ or US-4704635-\$ or US-5955753-\$ or US-5786588-\$ or US-6493030-\$ or US-6147338-\$ or US-5698844-\$ or US-5717458-\$ or US-5861620-\$ or US-5737016-\$ or US-5693932-\$ or US-5652622-\$ or US-5311320-\$ or US-5182623-\$).did. or (JP-01039171-\$).did. or (JP-2000078473-\$).did.) and gain) and length | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2003/04/01 13:52 |
| - | 6 | ((((US-5280511-\$ or US-5252868-\$ or US-4704635-\$ or US-5955753-\$ or US-5786588-\$ or US-6493030-\$ or US-6147338-\$ or US-5698844-\$ or US-5717458-\$ or US-5861620-\$ or US-5737016-\$ or US-5693932-\$ or US-5652622-\$ or US-5311320-\$ or US-5182623-\$).did. or (JP-01039171-\$).did. or (JP-2000078473-\$).did.) and gain) and length) and memory | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2003/04/01 13:50 |
| - | 1 | ((((US-5280511-\$ or US-5252868-\$ or US-4704635-\$ or US-5955753-\$ or US-5786588-\$ or US-6493030-\$ or US-6147338-\$ or US-5698844-\$ or US-5717458-\$ or US-5861620-\$ or US-5737016-\$ or US-5693932-\$ or US-5652622-\$ or US-5311320-\$ or US-5182623-\$).did. or (JP-01039171-\$).did. or (JP-2000078473-\$).did.) and gain) and length) and (memory with gain) | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2003/04/01 13:50 |
| - | 7 | ((((US-5280511-\$ or US-5252868-\$ or US-4704635-\$ or US-5955753-\$ or US-5786588-\$ or US-6493030-\$ or US-6147338-\$ or US-5698844-\$ or US-5717458-\$ or US-5861620-\$ or US-5737016-\$ or US-5693932-\$ or US-5652622-\$ or US-5311320-\$ or US-5182623-\$).did. or (JP-01039171-\$).did. or (JP-2000078473-\$).did.) and gain) and length) and ((memory or storage) and pixel) | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2003/04/01 13:53 |
| - | 7 | (((((US-5280511-\$ or US-5252868-\$ or US-4704635-\$ or US-5955753-\$ or US-5786588-\$ or US-6493030-\$ or US-6147338-\$ or US-5698844-\$ or US-5717458-\$ or US-5861620-\$ or US-5737016-\$ or US-5693932-\$ or US-5652622-\$ or US-5311320-\$ or US-5182623-\$).did. or (JP-01039171-\$).did. or (JP-2000078473-\$).did.) and gain) and length) and ((memory or storage) and pixel)) and gain | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2003/04/01 13:53 |
| - | 4 | (((((US-5280511-\$ or US-5252868-\$ or US-4704635-\$ or US-5955753-\$ or US-5786588-\$ or US-6493030-\$ or US-6147338-\$ or US-5698844-\$ or US-5717458-\$ or US-5861620-\$ or US-5737016-\$ or US-5693932-\$ or US-5652622-\$ or US-5311320-\$ or US-5182623-\$).did. or (JP-01039171-\$).did. or (JP-2000078473-\$).did.) and gain) and length) and ((memory or storage) and pixel)) and gain) and mos | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2003/04/01 14:06 |

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|---|-------|--|---|---------------------|
| - | 676 | MOS and Conductance and Length and width and gain | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2003/04/01 14:09 |
| - | 145 | MOS with Conductance and Length and width and gain | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2003/04/01 14:07 |
| - | 32 | MOS with Conductance with Length and width and gain | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2003/04/01 14:07 |
| - | 14 | MOS with Conductance with Length with width and gain | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2003/04/01 14:08 |
| - | 2 | MOS with Conductance with Length with width with gain | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2003/04/01 14:08 |
| - | 458 | MOS and Conductance and Length and width and gain and oxide | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2003/04/01 14:09 |
| - | 72 | (MOS and Conductance and Length and width and gain and oxide) and (gain with MOS) | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2003/04/01 14:27 |
| - | 0 | gain with amplifyer with oxide with length with width | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2003/04/01 14:23 |
| - | 30 | mos with gain with (calculation or equation) | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2003/04/01 14:47 |
| - | 25549 | mos .ti. | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2003/04/01 14:47 |
| - | 74 | (mos .ti.) and oxide and thickness and width and length and gain | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2003/04/01 14:48 |
| - | 10 | (mos .ti.) and oxide with thickness with width and length and gain | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2003/04/01 14:48 |
| - | 0 | (mos .ti.) and oxide with thickness with width with length with gain | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2003/04/01 14:49 |
| - | 8 | (mos .ti.) and oxide with thickness with width with length and gain | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2003/04/01 14:55 |

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|---|------|--|---|---------------------|
| - | 727 | load adj mos | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2003/04/01 14:55 |
| - | 8 | load adj mos with amplifying adj mos | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2003/04/01 14:58 |
| - | 1 | load adj mos with amplifying adj mos with gain | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2003/04/01 14:56 |
| - | 5 | load adj mos with amplifying adj mos and gain | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2003/04/01 15:10 |
| - | 9189 | MOS with amplifier | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2003/04/01 15:11 |
| - | 2188 | (MOS with amplifier) and load with amplifier | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2003/04/01 15:10 |
| - | 52 | MOS with amplifier with load with gain | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2003/04/01 15:30 |
| - | 233 | (memory or storage) with pixel with gain | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2003/04/01 15:39 |
| - | 3 | (memory or storage) with pixel with gain with mos | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2003/04/01 15:32 |
| - | 33 | (memory or storage) with pixel with gain with (different or high\$2 or low\$2) | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2003/04/01 15:33 |
| - | 52 | ((memory or storage) with pixel with gain) and image adj sensor | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2003/04/01 15:40 |
| - | 20 | ((memory or storage) with pixel with gain) and image adj sensor) and load | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2003/04/01 15:40 |
| - | 1094 | storage with transfer with sensor | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2003/04/02 10:34 |
| - | 26 | (storage with transfer with sensor) and storage with gain | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2003/04/01 15:53 |

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| - | 21 | ((storage with transfer with sensor) and storage with gain) and sensor with gain | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2003/04/01 15:53 |
| - | 9 | storage with transfer with sensor with gain | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2003/04/01 16:09 |
| - | 117 | (gain with different with amplifiers) and ((pixels or sensor) and (memory or storage)) | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2003/04/01 16:13 |
| - | 45 | ((gain with different with amplifiers) and ((pixels or sensor) and (memory or storage))) and transistor | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2003/04/01 16:12 |
| - | 6 | ((gain with different with amplifiers) and ((pixels or sensor) and (memory or storage))) and transistor) and MOS | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2003/04/01 16:12 |
| - | 66 | ((gain with different with amplifiers) and ((pixels or sensor) and (memory or storage))) and gain near4 different | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2003/04/01 16:13 |
| - | 52 | ((gain with different with amplifiers) and ((pixels or sensor) and (memory or storage))) and gain near3 different | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2003/04/01 16:13 |
| - | 55 | ((gain with different with amplifiers) and ((pixels or sensor) and (memory or storage))) and gain near3 different | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2003/04/01 16:14 |
| - | 49 | ((gain with different with amplifiers) and ((pixels or sensor) and (memory or storage))) and gain near2 different | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2003/04/01 16:19 |
| - | 24 | (storage with transfer with sensor) and ((gain or amplif\$6) near3 (different or very or vary)) | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2003/04/01 16:21 |
| - | 8 | memory adj cell with sensor adj cell | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2003/04/01 17:21 |
| - | 79 | memory adj (cell or unit) with sensor adj (cell or unit) | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2003/04/01 17:22 |
| - | 2 | memory adj (cell or unit) with sensor adj (cell or unit) with (gain or amplif\$7) | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2003/04/01 17:25 |
| - | 1685 | memory with sensor with (gain or amplif\$7) | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2003/04/01 17:25 |

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| - | 8325 | (storage or memory) with transfer with (sensor or pixel or reading) | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2003/04/02 10:35 |
| - | 179 | ((storage or memory) with transfer with (sensor or pixel or reading)) and (((gain or amplification or amplified) with (sensor or pixel or reading)) and ((gain or amplification or amplified) with (storage or memory))) | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2003/04/02 10:40 |
| - | 78 | ((storage or memory) with transfer with (sensor or pixel or reading)) and (((gain or amplification or amplified) with (sensor or pixel or reading)) and ((gain or amplification or amplified) with (storage or memory))) and MOS | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2003/04/02 10:40 |
| - | 24 | (US-5698844-\$ or US-5280511-\$ or US-5252868-\$ or US-4704635-\$ or US-5955753-\$ or US-5786588-\$ or US-6493030-\$ or US-6147338-\$ or US-5861620-\$ or US-5717458-\$ or US-5737016-\$ or US-5693932-\$ or US-5652622-\$ or US-5311320-\$ or US-5182623-\$ or US-5335008-\$ or US-6163215-\$ or US-6061093-\$ or US-6127892-\$ or US-3958187-\$ or US-5917343-\$ or US-6512544-\$).did. or (JP-01039171-\$).did. or (JP-2000078473-\$).did. | USPAT; JPO; DERWENT | 2003/04/02 12:41 |
| - | 20 | ((US-5698844-\$ or US-5280511-\$ or US-5252868-\$ or US-4704635-\$ or US-5955753-\$ or US-5786588-\$ or US-6493030-\$ or US-6147338-\$ or US-5861620-\$ or US-5717458-\$ or US-5737016-\$ or US-5693932-\$ or US-5652622-\$ or US-5311320-\$ or US-5182623-\$ or US-5335008-\$ or US-6163215-\$ or US-6061093-\$ or US-6127892-\$ or US-3958187-\$ or US-5917343-\$ or US-6512544-\$).did. or (JP-01039171-\$).did. or (JP-2000078473-\$).did.) and MOS | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2003/04/02 12:33 |
| - | 15 | ((US-5698844-\$ or US-5280511-\$ or US-5252868-\$ or US-4704635-\$ or US-5955753-\$ or US-5786588-\$ or US-6493030-\$ or US-6147338-\$ or US-5861620-\$ or US-5717458-\$ or US-5737016-\$ or US-5693932-\$ or US-5652622-\$ or US-5311320-\$ or US-5182623-\$ or US-5335008-\$ or US-6163215-\$ or US-6061093-\$ or US-6127892-\$ or US-3958187-\$ or US-5917343-\$ or US-6512544-\$).did. or (JP-01039171-\$).did. or (JP-2000078473-\$).did.) and MOS) and pixel | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2003/04/02 12:33 |
| - | 11 | ((US-5698844-\$ or US-5280511-\$ or US-5252868-\$ or US-4704635-\$ or US-5955753-\$ or US-5786588-\$ or US-6493030-\$ or US-6147338-\$ or US-5861620-\$ or US-5717458-\$ or US-5737016-\$ or US-5693932-\$ or US-5652622-\$ or US-5311320-\$ or US-5182623-\$ or US-5335008-\$ or US-6163215-\$ or US-6061093-\$ or US-6127892-\$ or US-3958187-\$ or US-5917343-\$ or US-6512544-\$).did. or (JP-01039171-\$).did. or (JP-2000078473-\$).did.) and MOS) and pixel) and gain | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2003/04/02 12:37 |

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| - | 9 | (((((US-5698844-\$ or US-5280511-\$ or US-5252868-\$ or US-4704635-\$ or US-5955753-\$ or US-5786588-\$ or US-6493030-\$ or US-6147338-\$ or US-5861620-\$ or US-5717458-\$ or US-5737016-\$ or US-5693932-\$ or US-5652622-\$ or US-5311320-\$ or US-5182623-\$ or US-5335008-\$ or US-6163215-\$ or US-6061093-\$ or US-6127892-\$ or US-3958187-\$ or US-5917343-\$ or US-6512544-\$).did. or (JP-01039171-\$).did. or (JP-2000078473-\$).did.) and MOS) and pixel) and oxide | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2003/04/02 12:37 |
| - | 5 | (((((US-5698844-\$ or US-5280511-\$ or US-5252868-\$ or US-4704635-\$ or US-5955753-\$ or US-5786588-\$ or US-6493030-\$ or US-6147338-\$ or US-5861620-\$ or US-5717458-\$ or US-5737016-\$ or US-5693932-\$ or US-5652622-\$ or US-5311320-\$ or US-5182623-\$ or US-5335008-\$ or US-6163215-\$ or US-6061093-\$ or US-6127892-\$ or US-3958187-\$ or US-5917343-\$ or US-6512544-\$).did. or (JP-01039171-\$).did. or (JP-2000078473-\$).did.) and MOS) and pixel) and oxide) and length and width | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2003/04/02 12:38 |
| - | 5 | (((((US-5698844-\$ or US-5280511-\$ or US-5252868-\$ or US-4704635-\$ or US-5955753-\$ or US-5786588-\$ or US-6493030-\$ or US-6147338-\$ or US-5861620-\$ or US-5717458-\$ or US-5737016-\$ or US-5693932-\$ or US-5652622-\$ or US-5311320-\$ or US-5182623-\$ or US-5335008-\$ or US-6163215-\$ or US-6061093-\$ or US-6127892-\$ or US-3958187-\$ or US-5917343-\$ or US-6512544-\$).did. or (JP-01039171-\$).did. or (JP-2000078473-\$).did.) and MOS) and pixel) and oxide) and length and width and load | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2003/04/02 12:43 |
| - | 9 | ((US-5698844-\$ or US-5280511-\$ or US-5252868-\$ or US-4704635-\$ or US-5955753-\$ or US-5786588-\$ or US-6493030-\$ or US-6147338-\$ or US-5861620-\$ or US-5717458-\$ or US-5737016-\$ or US-5693932-\$ or US-5652622-\$ or US-5311320-\$ or US-5182623-\$ or US-5335008-\$ or US-6163215-\$ or US-6061093-\$ or US-6127892-\$ or US-3958187-\$ or US-5917343-\$ or US-6512544-\$).did. or (JP-01039171-\$).did. or (JP-2000078473-\$).did.) and conductance | USPAT; JPO; DERWENT | 2003/04/02 12:42 |
| - | 9 | ((US-5698844-\$ or US-5280511-\$ or US-5252868-\$ or US-4704635-\$ or US-5955753-\$ or US-5786588-\$ or US-6493030-\$ or US-6147338-\$ or US-5861620-\$ or US-5717458-\$ or US-5737016-\$ or US-5693932-\$ or US-5652622-\$ or US-5311320-\$ or US-5182623-\$ or US-5335008-\$ or US-6163215-\$ or US-6061093-\$ or US-6127892-\$ or US-3958187-\$ or US-5917343-\$ or US-6512544-\$).did. or (JP-01039171-\$).did. or (JP-2000078473-\$).did.) and conductance) and gain | USPAT; JPO; DERWENT | 2003/04/02 12:42 |

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|---|------|---|---|---------------------|
| - | 7 | ((((US-5698844-\$ or US-5280511-\$ or US-5252868-\$ or US-4704635-\$ or US-5955753-\$ or US-5786588-\$ or US-6493030-\$ or US-6147338-\$ or US-5861620-\$ or US-5717458-\$ or US-5737016-\$ or US-5693932-\$ or US-5652622-\$ or US-5311320-\$ or US-5182623-\$ or US-5335008-\$ or US-6163215-\$ or US-6061093-\$ or US-6127892-\$ or US-3958187-\$ or US-5917343-\$ or US-6512544-\$).did. or (JP-01039171-\$).did. or (JP-2000078473-\$).did.) and conductance) and gain) and length and width (250/214).CCLS. | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2003/04/02 13:09 |
| - | 2 | | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2003/04/02 13:36 |
| - | 1812 | (250/208.1).CCLS. | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2003/04/02 13:10 |
| - | 336 | (348/308).CCLS. | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2003/04/02 13:11 |
| - | 124 | ((348/308).CCLS.) and gain | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2003/04/02 13:12 |
| - | 105 | ((((348/308).CCLS.) and gain) and amplifier | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2003/04/02 13:13 |
| - | 48 | ((((348/308).CCLS.) and gain) and amplifier) and memory | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2003/04/02 13:13 |
| - | 2124 | (250/214 R).CCLS. | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2003/04/02 13:36 |
| - | 4 | ("4704738" "5896063" "5949285" "5999049").PN. | USPAT | 2003/04/02 15:21 |
| - | 1 | hannett .xa. | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2003/04/02 18:07 |
| - | 24 | (US-6147338-\$ or US-5717458-\$ or US-5861620-\$ or US-5311320-\$ or US-5693932-\$ or US-5737016-\$ or US-5652622-\$ or US-5335008-\$ or US-5182623-\$ or US-6163215-\$ or US-6061093-\$ or US-3958187-\$ or US-6127892-\$ or US-5917343-\$ or US-6512544-\$ or US-5698844-\$ or US-5280511-\$ or US-5252868-\$ or US-4704635-\$ or US-5786588-\$ or US-6493030-\$ or US-5955753-\$).did. or (JP-01039171-\$).did. or (JP-2000078473-\$).did. | USPAT; JPO; DERWENT | 2003/10/29 16:38 |

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| - | 20 | ((US-6147338-\$ or US-5717458-\$ or US-5861620-\$ or US-5311320-\$ or US-5693932-\$ or US-5737016-\$ or US-5652622-\$ or US-5335008-\$ or US-5182623-\$ or US-6163215-\$ or US-6061093-\$ or US-3958187-\$ or US-6127892-\$ or US-5917343-\$ or US-6512544-\$ or US-5698844-\$ or US-5280511-\$ or US-5252868-\$ or US-4704635-\$ or US-5786588-\$ or US-6493030-\$ or US-5955753-\$).did. or (JP-01039171-\$).did. or (JP-2000078473-\$).did.) and gain\$2 | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2003/10/29 16:38 |
| - | 4 | ((US-6147338-\$ or US-5717458-\$ or US-5861620-\$ or US-5311320-\$ or US-5693932-\$ or US-5737016-\$ or US-5652622-\$ or US-5335008-\$ or US-5182623-\$ or US-6163215-\$ or US-6061093-\$ or US-3958187-\$ or US-6127892-\$ or US-5917343-\$ or US-6512544-\$ or US-5698844-\$ or US-5280511-\$ or US-5252868-\$ or US-4704635-\$ or US-5786588-\$ or US-6493030-\$ or US-5955753-\$).did. or (JP-01039171-\$).did. or (JP-2000078473-\$).did.) and gain\$2 with different | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2003/10/29 16:38 |
| - | 3 | ("5698844" "5717458" "5861620").PN. | USPAT | 2003/10/29 17:06 |
| - | 6 | ("Re34309" "5288988" "5311319" "5424529" "5488415" "5587738").PN. | USPAT | 2003/10/29 17:07 |
| - | 9 | 5698844.URPN. | USPAT | 2003/10/29 17:10 |
| - | 3 | ("5698844" "5717458" "5861620").PN. | USPAT | 2003/10/29 17:11 |
| - | 3 | 6147338.URPN. | USPAT | 2003/10/29 17:11 |
| - | 3 | ("5717458" "5861620" "6147338").PN. | USPAT | 2003/10/29 17:12 |
| - | 1 | 6486912.URPN. | USPAT | 2003/10/29 17:13 |
| - | 166 | pixel with memory with gain\$2 | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2003/10/29 17:14 |
| - | 5 | pixel with memory with gain\$2 with different | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2003/10/29 17:15 |
| - | 166 | pixel with memory with gain\$2 | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2003/10/29 17:15 |
| - | 5 | (pixel with memory with gain\$2) with transfer | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2003/10/29 17:15 |
| - | 60 | (pixel with memory with gain\$2) and transfer | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2003/10/29 17:18 |
| - | 2903 | pixel\$2 with amplifier | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2003/10/29 17:19 |

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| - | 3267 | pixel\$2 with ampliflier\$2 | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2003/10/29 17:19 |
| - | 1673 | (pixel\$2 with ampliflier\$2) and memory | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2003/10/29 17:19 |
| - | 369 | (pixel\$2 with ampliflier\$2) and memory with ampliflier | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2003/10/29 17:20 |
| - | 121 | ((pixel\$2 with ampliflier\$2) and memory with ampliflier) and gain\$2 | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2003/10/29 17:20 |
| - | 100 | ((((pixel\$2 with ampliflier\$2) and memory with ampliflier) and gain\$2) and pixels | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2003/10/29 17:21 |
| - | 72 | (((((pixel\$2 with ampliflier\$2) and memory with ampliflier) and gain\$2) and pixels) and transfer\$4 | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2003/10/29 17:22 |
| - | 24 | ((((((pixel\$2 with ampliflier\$2) and memory with ampliflier) and gain\$2) and pixels) and transfer\$4) and MOS | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2003/10/29 17:31 |
| - | 3541 | second adj gain | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2003/10/29 17:37 |
| - | 172 | (second adj gain) and pixel\$2 | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2003/10/29 17:32 |
| - | 110 | ((second adj gain) and pixel\$2) and memory | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2003/10/29 17:32 |
| - | 51 | ((((second adj gain) and pixel\$2) and memory) and transfer\$5 | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2003/10/29 17:32 |
| - | 16701 | second adj amplif\$4 | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2003/10/29 17:38 |
| - | 11222 | (second adj amplif\$4) and first adj amplif\$4 | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2003/10/29 17:38 |
| - | 6167 | ((second adj amplif\$4) and first adj amplif\$4) and gain | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2003/10/29 17:38 |

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| - | 110 | ((second adj amplif\$4) and first adj amplif\$4) and gain) and pixels | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2003/10/29 17:38 |
| - | 48 | ((((second adj amplif\$4) and first adj amplif\$4) and gain) and pixels) and memory | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2003/10/29 17:47 |
| - | 49 | ((((second adj amplif\$4) and first adj amplif\$4) and gain) and pixels) and storage | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2003/10/29 17:45 |
| - | 18 | (((((second adj amplif\$4) and first adj amplif\$4) and gain) and pixels) and storage) not (((second adj amplif\$4) and first adj amplif\$4) and gain) and pixels) and memory) | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2003/10/29 17:45 |
| - | 16233 | (storage with amplif\$4) | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2003/10/29 17:47 |
| - | 313 | ((storage with amplif\$4)) and (pixel with amplif\$5) | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2003/10/29 17:48 |
| - | 201 | ((storage with amplif\$4)) and (pixel with amplif\$5)) and noise | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2003/10/29 17:48 |
| - | 49 | ((storage with amplif\$4)) and (pixel with amplif\$5)) and noise with gain\$2 | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2003/10/29 17:55 |
| - | 10864 | (read adj out or read-out or readout) with amplifier | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2003/10/29 17:56 |
| - | 717 | (read adj out or read-out or readout) adj amplifier | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2003/10/29 17:56 |
| - | 380 | ((read adj out or read-out or readout) adj amplifier) and memory | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2003/10/29 17:57 |
| - | 4 | ((read adj out or read-out or readout) adj amplifier) and memory adj amplifier | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2003/10/29 17:57 |
| - | 2 | ((read adj out or read-out or readout) adj amplifier) and storage adj amplifier | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2003/10/29 17:57 |
| - | 84 | ((read adj out or read-out or readout) adj amplifier) and memory) and gain\$2 | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2003/10/29 17:58 |

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| - | 45 | ((((read adj out or read-out or readout) adj amplifier) and memory) and gain\$2) and pixels | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2003/10/29 18:02 |
| - | 104 | noise with amplif\$4 with pixels | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2003/10/29 18:03 |
| - | 7 | (noise with amplif\$4 with pixels) and (decrease or reduce) with gain | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2003/10/29 18:03 |